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specification. Claim 8 is amended herein to recite a multi-layer insulating film provided on the front surface of the substrate to clarify this claim, as disclosed on pages 6-8, particularly, page 8, lines 2+. By this amendment, this rejection should be overcome.

Claims 10, 13, 14 are rejected under 35 U.S.C. §112, second paragraph, for depending from canceled claims 1, 4 and 5. It is unclear why this rejection is included in the Office Action, since claims 10, 13 and 14 were also canceled in the *Amendment* filed on January 4, 2000 along with claims 1, 4 and 5. As a result, it is respectfully requested that this rejection be withdrawn.

Claims 7-9 and 16-18 are rejected under 35 U.S.C. §103(a) over Mano et al., in view of Ikeda, and claims 6, 15, 21 and 27 are rejected over these references, further in view of Yamazaki et al. (JP '128). These rejections are traversed for the reasons advanced below.

Independent claim 7 recites an aluminum nitride insulating film having a thermal conductivity of 0.6 W/cm·K or higher. In the specification, on page 5, lines 24 to 26, it is stated that the thermal conductivity of the film is preferably 0.6 W/cm·K or higher, and this value can be contrasted to 2 W/cm·K for single crystal aluminum nitride. Aluminum nitride insulating films have various values of thermal conductivity.

The cited references fail to show any value of thermal conductivity. Contrary to this, the subject application shows a preferable value of thermal conductivity of 0.6 W/cm·K or higher. For this reason, claim 7 does not require substantive amendment herein to overcome this rejection. Therefore, claims 7 and 16, depending therefrom, should be considered allowable.

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With respect to claims 6 and 21, these claims are amended herein to recite an aluminum nitride insulating film containing at least one of carbon and oxygen. The reference to Yamazaki et al. appears to disclose a nitride coating including a mixture of AlN, SiN and BN. The reference does not, however, disclose an aluminum nitride film including at least one of carbon and oxygen. As a result, claims 6, 15, 21 and 27 are also distinguishable over the references to Mano et al., Ikeda and Yamazaki et al., and thus, should equally be considered allowable.

Independent claim 8 claims a multi-layer insulating film provided on the rear surface of the substrate and comprising an aluminum nitride layer and a silicon oxide layer. The Office Action explains that the specification never discloses multi-layer insulating film provided on the rear surface of the substrate and comprising an aluminum nitride layer and a silicon oxide layer.

In response to the Office Action, claim 8 is amended to change the rear surface of the substrate to the front surface of the substrate to clarify the instant claim. As a result, claim 8 should be distinguishable over the references to Mano et al. and Ikeda, and claims 8 and 17 considered allowable.

Independent claim 9 recites a substrate having an insulating film comprising aluminum nitride outside the substrate and having a transistor inside the substrate. The Office Action does not appear to specifically address how the references disclose these features of claim 9. As a result, Applicants contend that this claim, as well as claim 18 depending therefrom, should be considered allowable. It is to be noted that Applicants are amending independent claim 9 herein to delete "liquid crystal" in line 1.

Claims 2, 3, 11, 12, 19, 20, 22-26 and 28-30 are rejected under 35 U.S.C. §103(a) over Troxell et al., in view of Ikeda, and further in view of Yamazaki et al. (JP'128). This rejection is traversed for the reasons advanced below.

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As provided above with respect to claim 7, claims 3, 20 and 23 recite an aluminum nitride insulating film having a thermal conductivity of 0.6 W/cm·K or higher. In the specification, on page 5, lines 24 to 26, it is stated that the thermal conductivity of the film is preferably 0.6 W/cm·K or higher, and this value can be contrasted to 2 W/cm·K for single crystal aluminum nitride. Aluminum nitride insulating films have various values of thermal conductivity.

The cited references fail to show any value of thermal conductivity. Contrary to this, the subject application shows a preferable value of thermal conductivity of 0.6 W/cm·K or higher. For this reason, claims 3, 12, 23 and 29 do not require substantive amendment herein to overcome this rejection. Therefore, these claims should be considered allowable.

With respect to claims 2 and 19, as well as claims 11 and 25 depending therefrom, respectively, these claims should be considered allowable for the reasons advanced above with respect to claims 6 and 21, namely, these claims are amended herein to recite an aluminum nitride insulating film containing at least one of carbon and oxygen. The reference to Yamazaki et al. appears to disclose a nitride coating including a mixture of AlN, SiN and BN. The reference does not, however, disclose an aluminum nitride film including at least one of carbon and oxygen.

Independent claims 22, 23, and 24 recite an aluminum nitride insulating film with aluminum to nitrogen ratio therein being in the range of 0.9 to 1.4. Aluminum nitride insulating films have various aluminum to nitrogen ratios. However, the cited references show no aluminum to nitrogen ratio. Contrary to this, the subject application shows a preferable aluminum to nitrogen ratio in the range of 0.9 to 1.4. For this reason, independent claims 22, 23 and 24, as well as claims 28-30 depending therefrom, should be considered allowable.

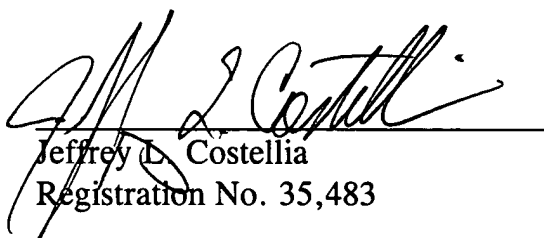
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With respect to the double patenting rejections, Applicants respectfully request that these rejections be held in abeyance and, thus, deferred for consideration of filing a Terminal Disclaimer after the above-noted rejections are overcome.

With respect to new dependent claims 31-42, these claims are added to recite that the aluminum nitride insulating film has a thickness of 5000 Å or less. The present invention as claimed in new dependent claims 31-42 is distinguished over the reference to Ikeda in that the reference to Ikeda forms a film 12 (made of SiO₂ or AlN or the like) to a thickness of 0.5 μm or more, which is 5000 Å or more.

In view of the foregoing, it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner, that claims 2, 3, 6-9, 11, 12, and 15-30 be allowed, that new claims 31-42 be allowed and that the application be passed to issue. If a conference would expedite prosecution of the instant application, the Examiner is hereby invited to telephone the undersigned to arrange such a conference.

Respectfully submitted,



Jeffrey L. Costellia
Registration No. 35,483

NIXON PEABODY LLP
8180 Greensboro Drive, Suite 800
McLean, Virginia 22102
(703) 790-9110
(703) 883-0370 FAX